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MEMORANDUM  
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TO: The Board of Oil, Gas, and Mining

FROM: Mary Ann Wright, Reclamation Biologist

SUBJECT: Plateau Resources Ltd.  
Lucky Strike/Tony M. Mine  
ACT/017/001  
Frank M. Mine  
ACT/017/017  
Garfield County, Utah

DATE: June 8, 1979

The Division of Oil, Gas, and Mining has reviewed the Mining and Reclamation Plans submitted by Plateau Resources Ltd. for the Lucky Strike/Tony M. Mine and the Frank M. Mine and feels that the plans meet the requirements of the Utah Mined Land Reclamation Act. The Division seeks the Board's concurrence so that tentative approval may be issued for these two mines.

The Lucky Strike/Tony M. Mine and the Frank M. Mine are connected to two other projects of note in this area. Plateau Resources is the developer of the adjacent Shootering Canyon Uranium Processing Plant and the community of Ticaboo, which are both presently being developed.

The Division also seeks the Board's concurrence with the amounts and form of the reclamation sureties.

An Executive Summary for these two mines is enclosed for your review and information.

MAW/te

Attachment: Executive Summary



EXECUTIVE SUMMARY  
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Plateau Resources Ltd.

Lucky Strike/Tony M. Mine

ACT/017/001

Frank M. Mine

ACT/017/017

Garfield County, Utah



#### COMMODITY:

The Lucky Strike/Tony M. Mine is a pre-existing uranium mine. Hydro-jet previously worked these claims until 1977 when Plateau Resources acquired the claims and lease hold interests. Ore recovery is by the underground modified room and pillar method. The mine life is projected to be 10-15 years.

The Frank M. Mine is a new, proposed mine. Mining will be conducted by means of horizontal drafts and lateral stope development. The mine life will be approximately 15 years.

#### LOCATION:

The Lucky Strike/Tony M. Mine is a 24 acre mining operation located in Sections 16 and 21, Township 35 South, Range 11 East, SLBM in Garfield County, Utah. The Frank M. Mine is a 65 acre mine located in Section 2, Township 35 South, Range 11 East. These locations are 55 miles south of Hanksville and 15 miles north of Bullfrog Basin via State Route 276 in Shootering Canyon.

*both mines  
have 1 State  
Section each*

The Enclosed map shows the location of these mines.

#### GEOLOGY AND SOILS:

The mining sites are located within the Henry Mountains Basin and is characterized by buttes, mesas and canyons. The buttes and mesas in this area are capped by the Salt Wash Member of the Morrison Formation. This sandstone unit contains the uranium deposits which are mined in the area. The site elevations are approximately 4,600 to 5,000 feet a.s.l.

Soils in the area are generally low in organic matter and range in texture from sand to loamy-fine sand. Any topsoil encountered from development will be stockpiled.

*Rock outcroppings  
occur throughout  
these two mine  
areas.*

#### HYDROLOGY:

Surface waters in the vicinity of the sites consist of Shootering and Hansen Creeks which flow into Lake Powell. These streams have been categorized as Class C waters which means that without treatment these waters are suitable for irrigation, stock watering, recreation and the propagation and perpetuation of fish and wildlife. Baseline water quality sampling has been done by the U.S. Nuclear Regulatory Commission for the Environmental Statement related to the proposed uranium processing facility at the site. It is presumed that surface drainage at the site will not be affected.



Groundwater at the site is important for its potential source of water supply. The Entrada and Navajo sandstones contain the primary aquifers in the area and several springs exist in the vicinity. The area of mining is dry, however, and it is not expected that groundwater will be encountered.

#### ECOLOGY:

Studies of the ecology of this area were conducted in 1977 for the Environmental Report for the proposed uranium processing facility. Vegetative plant cover varies between 15 and 25% and is dominated by blackbrush and Mormon tea. Wildlife diversity of the area is very low. The site is of little importance to deer. No endangered species have been identified in the area.

#### STRUCTURES AND FACILITIES:

The major portion of structures and facilities at the Lucky Strike/Tony M. site consist of the camp facilities which house the mine workers. Some 40 trailers comprise the camp. The mine facilities consist of trailers for the office and bathhouse, the water tank, the generator station, the waste dump area and the ore storage bins. The camp facilities will be relocated in the spring of 1980 and that area will be reclaimed as soon afterwards as possible. The site facilities at the Frank M. Mine will include a parking area, change house, shop, warehouse and storeyard, 3 ore bins, 2 trailers, 2 waste dump areas, generator, compressor units, water well and an access road.

#### MINING AND RECLAMATION:

##### During Operations (Lucky Strike/Tony M. Mine):

1. Mine development entry will commence from the cliff wall adjacent to previous mine openings. Mining and maintenance methods will be carried out in a safe and orderly manner. Disturbed materials will be waste and they will be allowed to seek their natural angles of repose. Waste rock will be used to maintain a low wide area for surface operation use.

EXECUTIVE SUMMARY  
Plateau Resources, Ltd.  
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2. Access roads in present use will be used for the mining project. The roads will have approximately 11% grades.
3. Site preparation will be completed by grading existing waste rock for level entry. No removal of trees or brush is necessary.
4. Any upper horizon material encountered will be stockpiled in an independent area for final reclamation.
5. Plant species for revegetation will be determined from test plot data.
6. A temporary camp, for employees only, will be maintained at the site. It will be moved when the Ticaboo site is ready in 1980.

During Operations (Frank M. Mine):

1. Mining and maintenance methods will be carried out in a safe and orderly manner.
2. Waste rock which is non-alkali or acid producing will be stored in a natural canyon-like depression the engineering of which complies with E.P.A. standards on flooding.
3. Site preparation will be completed by grading existing waste material for level entry. The removal of little brush will be required.
4. Any upper horizon material encountered will be stockpiled for final reclamation.

After Operations (Lucky Strike/Tony M. and Frank M. Mines):

1. Portal and ventilation shafts will be sealed to prevent unauthorized or accidental entry.



2. Waste rock dumps will be contoured to a naturally draining configuration.
3. Extraneous debris, unusable buildings, and scrap metal and wood will be removed from the location or buried.
4. All disturbed surfaces will be regraded, stockpiled soil added, and seeded.
6. Maintenance procedures for revegetation will be accomplished as necessary. The sites will be checked at least biannually by Plateau Resources personnel who will immediately augment any necessary steps in revegetation or erosion control. Critical sites and those not responding as projected will be checked more often.

#### IMPACTS:

The Lucky Strike/Tony M. mine facilities were in existence prior to the Utah Mined Land Reclamation Act under the direction of Hydro-Jet Services Inc. The reclamation plan will eliminate safety hazards and reduce environmental impacts.

The B.L.M. controls the surface use of the area in the vicinity of the Frank M. Mine although the mine area is previously owned. Primary uses of the area are for grazing and mineral exploration and mining. Extensive uranium exploration has occurred since the 1940's. Many of the abandoned drill roads and pads in the vicinity of the mine have been reclaimed by Plateau. Impacts to the environment due to development of this mine are expected to be minimal since the area has been determined to be of limited use to wildlife and hydrology.

#### SURETY ESTIMATE:

Surety was estimated at \$25,840.00 for reclamation of the Lucky Strike/Tony M. and \$46,619.00 was estimated for the Frank M. Mine. The proposed form of surety is a contract. A copy of the estimates are attached.



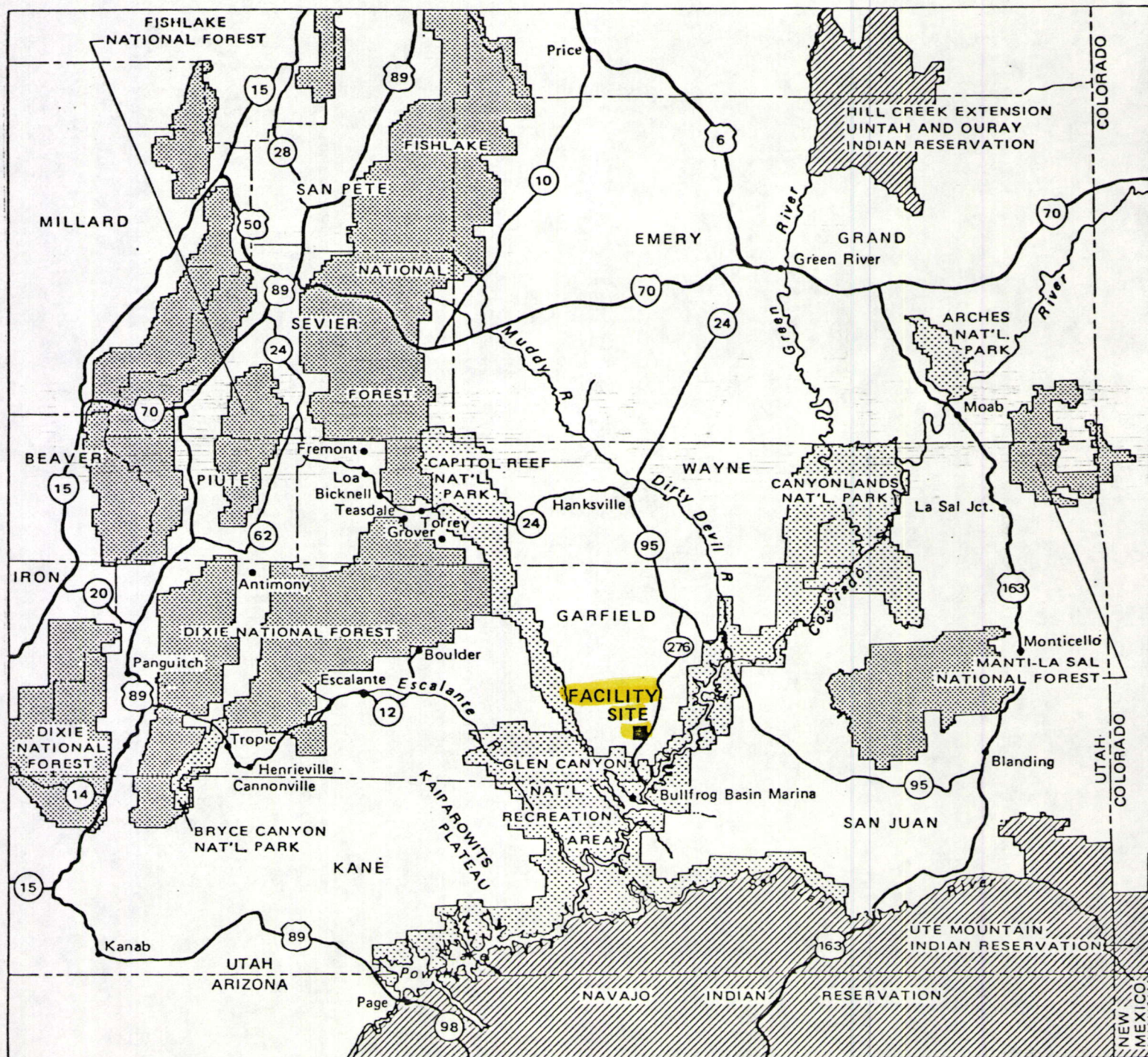
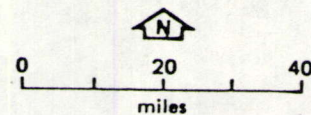
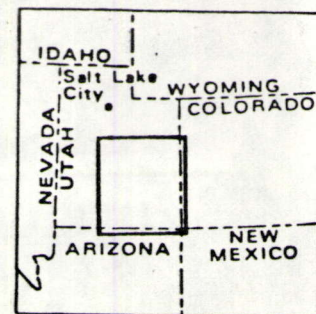
APPLICATION HISTORY (Lucky Strike/Tony M. Mine):

May 1977	Mining claims, leasehold interests and a leaching facility were acquired from Hydro-Jet Services by Plateau Resources, Ltd.
June 1977	Mining and Reclamation plans were submitted to the Division.
February 1979	Amendments to the Mining and Reclamation plan were submitted to the Division.
March 1979	Division personnel inspected the mine and proposed mill site.

APPLICATION HISTORY (Frank M. Mine):

March 1979	Division personnel inspected the site of the proposed mine.
May 1979	Mining and Reclamation Plans were submitted to the Division.







DIVISION OF OIL, GAS, AND MINING  
BOND ESTIMATE

OPERATOR: Plateau Resources, Ltd.  
MINE NAME: Lucky Strike/Tony M. Mine  
LOCATION: Sec. 16 & 21, Township 35 South, Range 11 East  
COUNTY: Garfield  
DATE: June 11, 1979

	Operation	Amount	Rate	Cost
A.	CLEAN-UP			
	1. Removal of structures & equipment.	\$1,500.00	lump sum	\$1,500.00
	2. Removal of trash & debris.	500.00	lump sum	500.00
	3. Leveling of ancillary facilities pads and access roads.			
B.	REGRADING & RECONTOURING			
	1. Earthwork including haulage and grading of spoils, waste and overburden.	40 hours cat time	\$85.00/hr	\$3,400.00
	2. Recontouring of highwalls and excavations.			
	3. Spreading of soil or surficial materials.			
C.	STABILIZATION			
	1. Soil preparation, scarification, fertilization, etc.	8 hours	\$85.00/hr	\$ 680.00
	2. Seeding or planting.	24A	\$200/ac	\$4,800.00
	3. Construction of terraces, waterbars, etc.			
D.	LABOR			
	1. Supervision.			
	2. Labor exclusive of bulldozer time.	40 hours	\$10.00/hr	\$ 400.00
E.	SAFETY			
	1. Erection of fences, portal coverings, etc.	seal 2 porta	\$500.00 ea	\$1,000.00
	2. Removal or neutralization of explosive or hazardous materials.			
F.	MONITORING			
	1. Continuing or periodic monitoring, sampling & testing deemed necessary.	3 inspection	\$50.00 ea	\$ 150.00
G.	OTHER			
	1. 1.5% inflation.	15 years	CAF=2.0789	12,430.00
			Total	\$25,840.00



DIVISION OF OIL, GAS, AND MINING  
BOND ESTIMATE

OPERATOR: Plateau Resources, Ltd.  
MINE NAME: Frank M. Mine  
LOCATION: Sec. 2, Township 25 South, Range 11 East  
COUNTY: Garfield  
DATE: June 13, 1979

	Operation	Amount	Rate	Cost
A.	CLEAN-UP			
	1. Removal of structures & equipment.	\$1,500.00	lump sum	\$1,500.00
	2. Removal of trash & debris.	\$ 500.00	lump sum	\$ 500.00
	3. Leveling of ancillary facilities pads and access roads.			
B.	REGRADING & RECONTOURING			
	1. Earthwork including haulage and grading of spoils, waste and overburden.	60 hours cat time	\$85.00/hr	\$5,100.00
	2. Recontouring of highwalls and excavations.			
	3. Spreading of soil or surficial materials.			
C.	STABILIZATION			
	1. Soil preparation, scarification, fertilization, etc.	15 hours	\$85.00/hr	\$1,275.00
	2. Seeding or planting.	65 acres	\$200/acre	\$13,000.00
	3. Construction of terraces, waterbars, etc.			
D.	LABOR			
	1. Supervision.	40 hours	\$10.00/hr	\$ 400.00
	2. Labor exclusive of bulldozer time.			
E.	SAFETY			
	1. Erection of fences, portal coverings, etc.	seal 1 portal	\$500/ea	\$ 500.00
	2. Removal or neutralization of explosive or hazardous materials.			
F.	MONITORING			
	1. Continuing or periodic monitoring, sampling & testing deemed necessary.	3 inspection	\$50.00/ea	\$ 150.00
G.	OTHER			
	1. 5% inflation.	15 years	CAF=2.0789	\$22,425.00
			Total	\$46,619.00